

**Notice of Allowability**

Application No.

10/748,596

Examiner

M. R. Sedighian

Applicant(s)

KERFOOT ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

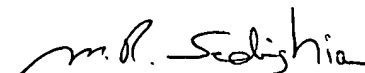
1. ☒ This communication is responsive to 3/14/05 and 8/17/05.
2. ☒ The allowed claim(s) is/are 13-33 and 35-45.
3. ☒ The drawings filed on 30 December 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**M. R. SEDIGHIAN**  
PRIMARY EXAMINER

1. This communication is responsive to applicant's 3/14/05 amendments in the application of Kerfoot III et al. filed 12/30/03. The amendments have been entered. Claims 13-33 and 35-45 are now pending.

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Donald J. Perreault on 8/17/05.

### **IN THE CLAIMS**

3. a) In claim 13, line 4, the word "each" has been changed to --- said at least one ---.
- b) In claim 13, line 8, the word "wavelengths" has been changed to --- a wavelength ---.
- c) In claim 13, lines 8-9, the phrase "each information" has been changed to --- said corresponding information ---.
- d) In claim 23, line 5, the phrase "each of" has been deleted.
- e) In claim 23, line 6, the phrase "a respective" has been changed to --- an associated ---.
- f) In claim 23, line 9, the phrase ", each of said noise signals on a respective one" has been changed to --- on an associated one ---.
- g) In claim 23, lines 10-11, the phrase "said information signals and said noise signals" has been changed to --- said associated information signal and said associated noise signal ---.

h) In claim 26, line 2, the phrase "idler channels" has been changed to --- idler channel wavelengths ---.

i) In claim 27, line 3, the phrase "utilized channels" has been changed to --- utilized channel wavelengths ---.

j) In claim 36, line 3, the phrase "idler channels" has been changed to --- idler channel wavelengths ---.

k) In claim 37, line 3, the phrase "utilized channels" has been changed to --- utilized channel wavelengths ---.

l) In claim 38, lines 2-3, the phrase "utilized channels" has been changed to --- utilized channel wavelengths ---, and in line 4, the phrase "idler channels" has been changed to --- idler channel wavelengths ---.

m) In claim 44, line 6, the phrase "to each said information signal of the" has been deleted.

n) In claim 44, line 6, the phrase "at least one information signal" has been changed to --- said at least one information signal ---.

o) In claim 44, line 7, the phrase "each said noise signal at each wavelength" has been changed to ---said at least one noise signal at a wavelength ---.

p) In claim 44, line 8, the phrase "an information signal of the" has been changed to --- said ---.

4. The following is an examiner's statement of reasons for allowance:

As to claims 13-22, the prior art of Huang (US Patent No: 6,256,138), Alexander et al. (US Patent No: 5,726,784), and Suzuki (US Patent No: 4,945,531) do not fairly teach or suggest

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a WDM transmission system that is comprised of a WDM combiner, a transmitter that provide an information signal, a noise source, and a filter that is coupled between the noise source and the WDM combiner, wherein the filter is characterized by a stop band that blocks a wavelength corresponding to the information signal and a pass band that passes wavelengths not within the stop band.

As to claims 23-33 and 35-45, the prior art of Huang (US Patent No: 6,256,138), Alexander et al. (US Patent No: 5,726,784), and Suzuki (US Patent No: 4,945,531) do not fairly teach or suggest a WDM transmission system that is configured for communicating a predetermined number of optical channel wavelengths including a first number of utilized channel wavelengths and a second number of idler channel wavelengths, wherein the system is comprised of a transmitter to provide an information signal on a respective one of the utilized channel wavelengths, a noise source, a filter that is coupled to the noise source and that provides a noise signal on an associated one of the idler channel wavelengths, and a WDM combiner for combining the information signal and the noise signal.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Huang (US Patent No: 6,256,138) is cited to teach a fiber filter 14 that allows a laser light output from a pump laser module 12 to pass through a WDM device 16, but attenuate ASE signal that is generated by an EDFA (col. 1, lines 58-59, col. 3, lines 14-16, 34-38).

Alexander et al. (US Patent No: 5,726,784) is cited to teach a WDM optical system (fig. 1) that is comprised of a WDM combiner (50, fig. 1), a transmitter (24, fig. 1) coupled to the WDM combiner (50, fig. 1); a broadband optical signal source (22, fig. 1), and a filter circuitry (33, fig. 2) coupled between the signal source (22, fig. 1) and the WDM combiner (50, fig. 1).

Suzuki (US Patent No: 4,945,531) is cited to teach a WDM transmission system (620, fig. 1) having an optical filter (100, fig. 1) for filtering spontaneous emission noise (col. 2, lines 40-48) from an optically multiplexed signal (621, fig. 1) which has been amplified by an optical amplifier (622, fig. 1).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
M. R. SEDIGHIAN  
PRIMARY EXAMINER